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## How to Acquire U.S. Technology By 19 Methods

The Reagan administration is trying to cut off the flow of technological secrets to the Soviet Union. Over the last decade, U.S. officials have watched in frustration as the Kremlin buys, borrows or steals billions of dollars' worth of American technical know-how.

When put to military use, this technology often gives the Soviets an edge that costs the United States billions to overcome.

In a secret version of Defense Secretary Caspar W. Weinberger's annual report to Congress, the Pentagon lists 19 explicit ways the Russians acquire U.S. military and industrial secrets, both legally and illegally. My associate Dale Van Atta obtained a copy of the report.

Here are the legal ways the Soviets pick our brains:

• "Complete [turnkey] plant sales." The Russians buy one entire factory, lock, stock and assembly line, set it up in the Soviet Union and copy it piece by piece.

 "Direct investment in Eastern Europe." The Russians siphon off Western technology acquired by their European satellites.  "Patents and licenses with extensive teaching effort." Sometimes a seemingly harmless patent application contains a wealth of technical detail the Russians can put to military use.

"Joint ventures and joint production development" with Western firms.

"Technical data and engineering documents."

- "Proposals, pre-sale negotiations and sales presentations." By soliciting bids from Western companies, the Russians can learn a lot without ever buying anything.
  - "Commercial visits."
- "Governmental and industrial equipment sales."
  - · "Sales of products."
- "Scientific, technical and student exchanges."
- "Open literature," for example, journals, magazines, technical papers.
- "Science and technology conferences, trade shows and exhibits."

To understand how important this information is, it must be remembered that the Soviet Union is still technologically backward in almost every area but military equipment. Things that Americans take for granted—like a serviceable pencil with an eraser—are technical marvels to the Russians.

As for the illegal ways the Kremlin acquires Western technology, Weinberger's report lists:

"Hostile intelligence service ac-

quisitions." In simpler English, this means theft by KGB-agents.

 "Recruited agents and industrial espionage." In the past decade, there have been almost a dozen significant losses of technology through American ican traitors, who are usually monvated by greed, not ideology.

• "Illegal arms trade." It's a rare arms merchant who worries about embargoes, legal niceties or the ideology of his customers, as long as their checks don't bounce,

• "Illegal trade in other commodities."

- "Third country diversions."

  These involve the acquisition of secrets from American allies or neutral countries that either don't know or don't care that U.S. equipment is actually destined for the Soviet, Union instead of domestic users.
- "Captured in war." The Vietnam debacle left a wealth of U.S. weapons in Communist hands.
- "End-user diversions." This means the application of legally purchased American technology to military uses in violation of the purchase agreement. For example, the United States sold the Russians ball: bearing grinders capable of producting pinhead-size bearings accurate to one 25-millionth of an inch. The Sod viets used them to produce ball; bearings for the guidance systems of their SS18 missiles, whose resulting accuracy was the principal reason for consideration of the multibillion-dollar MX missile system.